NRCS Natural Resources Conservation Service

Early Successional Habitat Development/Management

Brush Piles for Wildlife

Conservation Practice WV Job Sheet Code 647

Definition

The creation of artificial early successional habitat and supplemental cover for wildlife.

Purpose

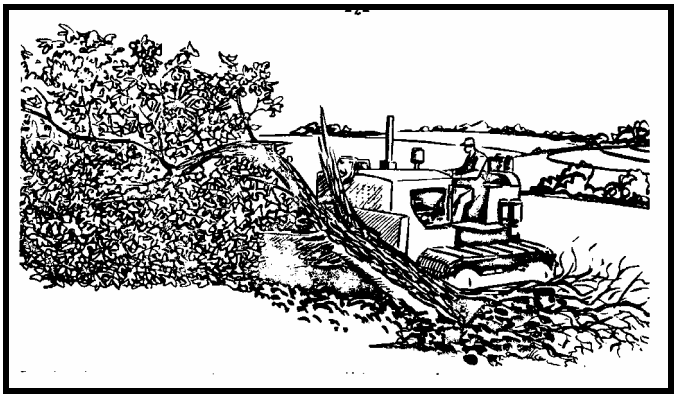
The purpose of this practice is to provide habitat for those species of wildlife that benefit from early successional vegetation or the creation of brush and woody cover. This practice is normally established concurrently with other practices as part of a wildlife resource management system.

Conditions Where Practice Applies

This job sheet pertains to the creation and establishment of brush piles for wildlife. Brush piles may be constructed as supplemental habitat where the establishment of woody shrubby thickets is not practical; or temporary habitat until permanent shrubby vegetation may become established.

Preservation and maintenance of nesting and escape cover is an important element of habitat management. Preserving any existing hedgerows, dense grasslands, low-growing shrub and briar thickets, field borders and brushy cover along open field habitat is essential for an area to support small game and mammal population. Disturbances to these areas such as mowing, disking or clearing of vegetation within these habitats should be kept to a minimum where wildlife is the primary concern. Where possible, allow vegetation to grow freely and avoid agricultural activities during the peak nesting season (February to September). Occasional mowing, disking, and burning are beneficial management practices as they promote regeneration of succulent grasses and other preferred forage vegetation. However, such disturbance should be conducted on a rotational basis and be implemented outside the nesting season when possible.

When natural cover is limited in wildlife habitat, brush piles may be provided. If possible, brush piles should be a by-product of other land management activities, rather than a specific practice. Timber harvest, timber stand improvements, pasture or cropland clearing, and firewood cutting all provide woody limbs suitable for brush piles.



Brush piles are frequently constructed as a byproduct of other land management activities.

In addition to the existing vegetation, brush piles can also improve and supplement an area's habitat composition by providing nesting and escape cover especially for rabbits and small mammals.

Construction

Brush piles are constructed by piling brush and loose branches on top of a base frame comprised of larger logs or tree trunks (See Figure 1).

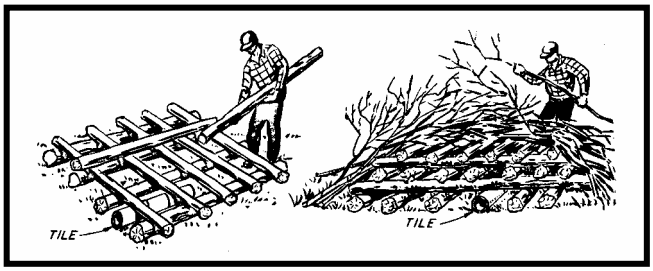


Figure 1 – Brush Pile Construction

The base of the pile is constructed by stacking logs perpendicular to and on top of one another to create a sturdy crisscross log cabin-like structure with a height of 12 to 20 inches. Some of the base logs can be as close as 3 inches apart. Old and discarded fence posts serve as good base materials. The largest diameter boughs should be on the bottom. Cinder blocks, stumps, rocks or similar materials can be used to elevate the base up to eight inches off the ground to prevent the acceleration of weather rot and enable larger mammals like cottontails to enter the pile. The crown is constructed by piling loose branches on top of the base to create a tangled pile of brush.

A four-foot long piece of drainage tile or PVC pipe may be placed under the base to enable cottontails or other small mammals to easily enter the pile. The diameter of the tile or pipe should not exceed six inches (6") to preclude foxes and other predators from entering the pile.

Size

Brush piles can be constructed of various sizes according to the habitats in which they are placed. However, piles 12 to 18 feet in diameter and three to six feet in height are best in order to enable multiple individuals and species to occupy a single pile. Smaller brush piles are acceptable when moderate use is expected. Small brush piles can always be enlarged later as use increases.

Placement

Properly locating brush piles within an area is important. They should allow relatively safe access to food sources and permit wildlife to forage over a larger area. Brush piles should be placed at intervals near feeding areas, along field borders and within idle fields or abandoned areas.

Avoid the bottoms of drainages and low spots where standing water might render the brush pile useless.

Well constructed brush piles can have a life span of as much as 10 years, and proper placement can promote use by eastern cottontails as well as many different species of songbirds, insects, and other animals.

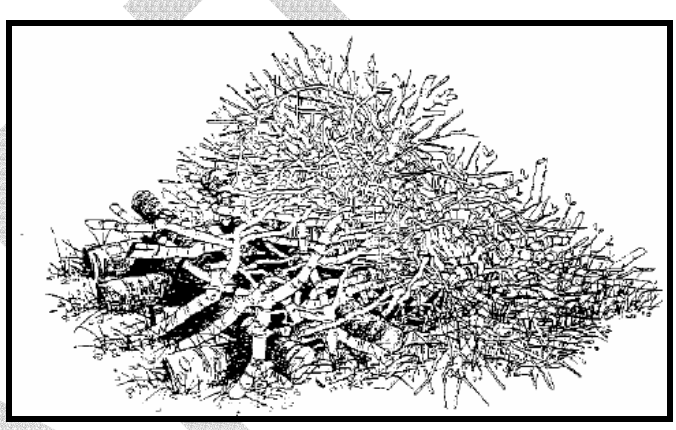


Illustration of a properly constructed brush pile.

Brush piles should be placed along hedgerows, briar thickets, windbreaks, and within dense grasslands when additional brushy cover is nearby. Improper placement of a brush pile (e.g., isolated and distant from tall grass and other forms of escape cover) can potentially create a "predator trap" for cottontails and other prey species due to increased access by predators. Brush piles help to establish a balance between predator and prey species within an area, but improper placement can cause a brush pile project to be counterproductive.

Lands managed for timber can benefit rabbits, small mammals and birds when slash from harvested trees is left as brush piles. Tree tops and branches assembled into windrow piles following harvest or the creation of forest openings can provide excellent cottontail cover for several years.

Windrowed piles should to the extent possible be constructed in the same manner as standard brush piles with the log cabin-like base and loose material piled as the canopy.

Living Brush Piles/Green-Tree Cuts

A simple, convenient brush pile needed in field borders, woodland edges, and odd areas may be created by cutting a larger diameter wolf or edge tree and leaving it where it falls. This will allow vines, weeds, and briar tangles to grow up in and around the felled crown and create cover and shelter for a variety of animals. Quail, rabbits, and many species of songbirds will make use of this type of cover.

Another method of creation is know as the "Living" brush pile. Evergreen trees such as Eastern red cedar, American holly or even deciduous trees may be used. Choose wide-crowned trees that are 6 to 8 feet tall.

In the spring of the year, make a cut in the tree with a hand or chainsaw 3-4 feet above the ground opposite the intended location of the pile. Cut deep enough so that you can push the top over, leaving a connecting strip of bark and wood (hinge) to nourish the tree. Use a stake or stone to tie the top of the tree to the ground.

Select trees with grape or honeysuckle vines nearby that will grow and cover the pile. If the trees are cut to fall in a crisscross pattern over each other, a living brush pile is created.

This figure illustrates green tree cuts (living brush piles) where the stem is partially cut, allowing additional growth and surrounding vegetation to create a brush pile.

Brush piles of this type are loosely formed and do not give the best protection from severe weather. They can be made more dense by using the bases of the cut trees as foundations and piling dead limbs and brush over them. Old piles may need to be reworked every 5 or 6 years.

Operation and Maintenance

When properly constructed brush piles may last for as long as 10 years with very little maintenance. The lifespan of brush piles depend on factors such as climate, composition and species of the brush used and the method and type of construction.

Periodic monitoring of brush piles to determine the amount of use and production should be performed at least annually during nesting seasons of small mammals such as rabbits (February – September).

Additional boughs, branches, and fine brush may need to be added to the structure each year to maintain the desired density.

If PVC pipe, tiles or similar devices are installed as escape routes in brush piles, periodically check these structures for obstructions that may inhibit wildlife use.

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Specifications

Site-specific requirements are listed on the following pages of this job sheet. Specifications are prepared in accordance with the WV NRCS Field Office Technical Guide.

Early Successional Habitat Management/Development – WV Job Sheet

Client:	**Farm #:**
Field(s):	**Tract #:**
Designed By:	**Date:**

Purpose (check all that apply)	
☐ Create habitat for cottontail rabbits	☐ Create habitat for other small mammals
☐ Supplemental habitat established in conjunction with, or as a result of, other practices. (e.g. forest opening slash piled adjacent to the openings)	☐ Component of a wildlife management plan developed using the (645) Upland Wildlife Habitat Management standard

Layout

Target Wildlife Specie(s):

Home Range: ac

Field	Number of Brush Piles	Type [1]	Living Brush Pile Tree Species to be Cut [2]	Entrance or Escape Pipe	Approx. Size [2] (ft)	Surrounding Cover Type [3]	Temp. or Perm. [4]	Component of other Landuse Activity
				YES NO				
				YES NO				
				YES NO				
				YES NO				
				YES NO				
				YES NO				
				YES NO				
				YES NO				

[1] Identify whether this brush pile is a **STANDARD BP, WINDROWED BP, EDGE TREE BP or LIVING BP**.

[2] For living brush piles identify the tree species to be used (e.g. red cedar)

[3] List the approximate size of the brush pile after construction (e.g. 12 x12 x3).

[4] Identify the surrounding cover type to the planned brush pile as **WOODLAND, SCRUB-SHRUB, GRASSLAND, FIELD EDGE/BORDER,** or **OTHER**.

[5] Identify whether the brush pile is to be a permanent structure and maintained indefinitely (**PERM**); or if the brush pile is to be maintained only as needed until suitable vegetated cover becomes established (**TEMP**).

[6] If the planned brush piles are being completed as a result of some other activity such as a timber harvest or creation of a permanent food plot, list the activity. Otherwise list as N/A.

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If needed, an aerial view, map or a sketch of the practice can be shown below. Other relevant information, complementary practices and measures, and additional specifications may be included.

Additional Specifications and Notes: (i.e. operation and maintenance specifics, etc.)

Questions regarding the operation, harvest schedule or establishment of this practice should be directed to:

_____ at_____